



Federal Emergency Management Agency

Washington, D.C. 20472

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JUL 24 1984

Mr. Robert Kimmitt
Executive Secretary
National Security Council
Washington, D.C. 20506

Dear Mr. Kimmitt:

Enclosed for consideration of the Steering Group are some technical comments for improving the draft Input/Output report of the Macroeconomic Working Group as requested in your memorandum of July 17, 1984.

Sincerely,

Louis O. Giuffrida
Louis O. Giuffrida
Director

Enclosure

DHS Review Completed.

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- (S) 1. An evaluation of the overall consistency of the Stockpile Macroeconomic Input/Output (I/O) Study with the Emergency Mobilization Preparedness Board (EMPB) wartime scenario appears to be needed. Both the level of defense production and the use of Federal economic and energy controls in the I/O Study do not appear to reflect all provisions of the EMPB wartime scenario. In regard to defense production, the maximum military spending in the I/O Study is less than 20 percent of GNP for the three-front EMPB war scenario, while 45 percent of GNP was required for military spending in World War II. In addition, the Federal fiscal, monetary, and energy controls prescribed in the EMPB scenario to help sustain the economy do not appear to be integrated into the I/O Study.
- (U) 2. An evaluation is needed of the impact on U.S. wartime industrial production resulting from the constraints on energy supplies assumed in the I/O Study. A worldwide energy supply shortage is an integral part of the wartime scenario assumed in the I/O Study. As a result, domestic energy prices are assumed to increase by several hundred percent during the energy-short, wartime scenario used in the I/O Study. Despite such unprecedented energy price increases, the growth rates in energy production capacity are assumed to remain at low, historic, peacetime levels, rather than at the higher rates of capacity expansion that could be expected under free market conditions. The result of the constrained growth assumed for domestic energy production capacity, in combination with the assumed worldwide energy shortage, would be a lower level of U.S. industrial production than would be expected under true free market conditions.
- (U) 3. The impact on the overall state of the economy that would result from constraints assumed in the I/O Study regarding levels of investment, civilian consumption, imports, exports, and energy, needs to be evaluated. According to previous reports on this Study, the rate of inflation reaches 22 percent and unemployment reaches an implausible 10 percent during wartime conditions.
- (U) 4. The Federal controls used in the I/O Study to achieve the mix and level of wartime GNP should be delineated and evaluated. Such a presentation would include identification of the specific types of controls that would be used to halt new car production, halt housing construction, halt civilian energy consumption, alter the U.S. private investment mix, reduce State and local spending, and achieve the other austerity measures assumed in the I/O Study. In regard to civilian housing construction, an evaluation of the geographic conformity of present housing stock with wartime geographic housing requirements would provide a useful support for the assumptions presented.
- (U) 5. The I/O Study assumes lower gross U.S. import levels throughout the war. This assumption should be evaluated for consistency with the expanded level of U.S. imports of strategic and critical materials (S&CM) assumed in the companion Stockpile Study on S&CM Supply. In the S&CM Supply Study, the United States is not bound by peacetime trade patterns and has a low elasticity of demand that draws high levels of S&CM wartime supplies to the United States.
- (U) 6. A description of the two different models used to forecast wartime requirements in the I/O Study, the rationale for apportioning the economy wartime requirements between the two models, and an evaluation of the compatibility of the two different economic models to forecast total wartime requirements should be provided.



ASSISTANT SECRETARY

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

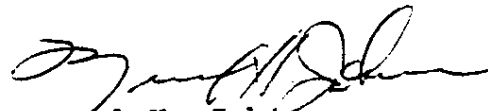
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MEMORANDUM FOR ROBERT M. KIMMITT
EXECUTIVE SECRETARY
NATIONAL SECURITY COUNCIL

Subject: National Defense Stockpile Goals Review

The Treasury Department has reviewed the draft Input/Output report of the Macroeconomic Working Group that was sent to the Department on July 17, 1984. As a member of the Working Group we expressed our concerns about the data and methodology as the work of the group progressed. Most of these concerns were resolved to our satisfaction. Those that were not resolved are not sufficiently critical for us to withhold approval. Our general view is that this Report is the best that can be produced given the time, staff, data and other resource limitations.


Manuel H. Johnson
Assistant Secretary for
Economic Policy



UNITED STATES DEPARTMENT OF COMMERCE
International Trade Administration
Washington, D.C. 20230
ASSISTANT SECRETARY FOR TRADE ADMINISTRATION

04 JUL 1984 15:33

JUL 26 1984

Mr. Robert M. Kimmitt
Executive Secretary
National Security Council
Washington, D.C. 20506

Dear Mr. Kimmitt:

The Department of Commerce has reviewed the Input/Output Report that was submitted in your July 17 memo and recommends that the following points be addressed before the Report is adopted:

1. Domestic Limits of Defense Production Act (DPA):

The statutory basis for controlling non-essential civilian tier investment is unclear. There are no statutory controls in the DPA to prevent a U.S. firm in the non-essential civilian tier from obtaining enough resources in the international market to produce products (e.g. homes) beyond the investment assumptions in the model.

2. Ammunition Investment Assumptions:

Ammunition will be in short supply during the three years of war. Since the need for ammunition is as great in the first year as any other, the entire ammunition investment should be allocated to the mobilization year in order to maximize output as quickly as possible.

3. Reliance on World War II Figures for Import/Export Accounts:

The assumption that we will export slightly more than we import during the mobilization may be correct, but the accompanying discussion should not draw so heavily on WWII experience. Our international trade situation was very different in that era; Lend Lease may have distorted the import/export accounts; and the high cost of international transportation may have affected imports and exports equally.



- 2 -

4. Discussion of Automobile Production Assumptions:

It is stated that 13.3 billion should be sufficient to maintain the current transportation fleet in the essential civilian sector out of the "remaining" 19.6 billion. However the current turnover in automobile ownership is substantial so a market in which no new cars are produced will greatly increase resource requirements in the repair business. Therefore it will be necessary to explain more clearly the assumptions regarding current and prospective auto repair investment.

5. Discussion of Transportation Infrastructure:


There is no discussion to indicate whether the deteriorating transportation infrastructure (e.g. railbed, bridges, highways) is allocated an increase in investment and, if so, how much. Domestic transportation bottlenecks can be a significant problem. Has the study taken this issue into account?

6. Level of Disaggregation

Explicit recognition should be given to the fact that the 4-digit SIC level of aggregation used in this study is appropriate for stockpile planning, but may need to be further disaggregated for other related mobilization tasks. More detailed analysis for example, might show bottleneck problems for specific items not identified in this study. *6/1-7*

Our representative will be prepared to discuss these issues at the July 27 meeting.

Sincerely,


William T. Archey
Acting Assistant Secretary
for Trade Administration



Department of Energy
Washington, D.C. 20585

July 26, 1984

Mr. Robert M. Kimmitt
Executive Secretariat
National Security Council
Washington, D.C. 20506

Dear Mr. Kimmitt:

Concerned offices within the Department of Energy have conducted a quick review of the draft Input/Output Report of the Macroeconomic Working Group of the National Defense Stockpile Goals Review effort. The opportunity to review this document is appreciated; however, the review time granted has been extraordinarily short. Though the overall document seems to be well-fashioned, a quick review reveals certain elements which at least at this point seem anomalous. As a consequence, the eventual concurrence of the Department of Energy in this report will be contingent upon satisfactory resolution of the issues noted in the enclosure. It is suggested that resolution of these issues be accomplished in discussions between members of DOE and of the Input/Output Working Group.

Sincerely,

A handwritten signature in dark ink, appearing to read "H.A. Merklein", written over a horizontal line.

Dr. Helmut A. Merklein
Assistant Secretary
International Affairs and
Energy Emergencies

Enclosure

Enclosure

Summary of comments by the Department of Energy on the Input/Output Report of the Macroeconomic Working Group, National Defense Stockpile Goals Review.

I. Investment Demand:

- A. Too much new investment appears to be assigned to the nonessential civilian tier. Nonessential GNP during the war is estimated to amount to about 12 percent of total GNP; nonessential civilian gross output is 15 percent of total gross output. We note, however, that the composition of gross capital investment would appear to make available for the nonessential sector something like 60 percent of total resources available for new investment. ✓
- B. The estimate for investment requirements in the energy sector appears to be somewhat low if recent history is a guide to the future. In the report, investment levels in energy (1983 dollars), are about \$41 billion. However, Census data indicate that in 1982 capital expenditures in U.S. oil and gas production alone totaled \$46 billion. Also for 26 major energy companies alone, domestic energy capital expenditures were about \$42 billion in 1982. Thus the base year numbers used in this report may be too conservative with respect to the level of investment in energy.
- C. The iterative process for deriving investment demand is ambitious, yet well done for the General Investment category. It seems more appropriate that this procedure be carried out for all categories.
- D. Page 13 states that the initial run was based on "essential final demand--excluding most civilian investment...." but did include "the direct investment in the DEIMS output..." Was there a second iteration to pick up investment required to satisfy the civilian investment? If not, would it make a significant difference?
- E. Also, the discussion suggests that the Wharton macro run was frozen and that the Wharton aggregate investment total of \$207 billion was kept for the I/O runs. Basically, nonessential civilian tier demand for investment takes up the slack after the Industrial Tier and Defense Tier demands are calculated. This last statement does not come out clearly enough in the discussion.

- F. There are a number of issues which can be raised concerning the relationships between investment magnitudes, timing and the expected increases in sector outputs:
- (1) How were the time lags between investment in enhanced oil recovery techniques and increased production from secondary and tertiary processes treated?
 - (2) While it is agreed that the coal industry, per se, has significant unused capacity, it is not clear that the associated transportation and storage facilities will be available to permit rapid changes in coal utilization by end users.
- G. On page 14, the discussion of ammunition demand is fuzzy. How does the "other half...added to the investment requirements calculated by OBA" (which should be half of \$20.4 Billion from DEIMS) relate to the table which follows directly below the discussion? Why does DEIMS only pick up half? How is the \$10.2 Billion spread over the three years? What is the OBA calculated investment requirements?

II. DEIMS and FEMA

- A. It is clear from the discussion that the defense tier was passed through the DEIMS bridge table and then through the DEIMS I/O table (which is essentially the DRI I/O table) and the output aggregated. The operational reasons for segmenting the calculations between DEIMS and FEMA are: (1) the DEIMS bridge table is better than DITT for translating Defense final demand by components into final demand by sector, and (2) DEIMS generates some investment information that is desirable. However the DEIMS inverse is different from the FEMA inverse. If the bridged final demand from DEIMS were run through the FEMA inverse, or alternatively, if all final demands including defense were run with the DEIMS/DRI model, how would the calculated gross output be altered? This is not a suggestion to alter the methodology, but there should at least be a hip-pocket answer.
- B. An explanation of how the final demands for the essential civilian, industrial, and nonessential civilian tiers were converted into bills of goods and services at the sector level would be helpful. It is understood that the DEIMS performs this function for the military tier; however, the details of how the allocation of the final demands for the nonmilitary

tiers was accomplished is unclear. In addition, it is requested that a copy of these data be furnished to DOE as soon as possible to facilitate the conduct of the Mobilization Energy Requirements Study (MERS) being conducted under Project 87.

III. General Comments

A. Conservative Estimates

The report claims estimates of required critical materials is conservative. In a quasistatic economy this may be true; however, in an economy undergoing a rapid transition to wartime production there will be unavoidable waste, inefficiencies, misallocations, and delays which will require more inputs, not less.

B. Specify Base Path of the Economy

It would be very informative to have a base macro forecast presented with an associated set of I/O runs. This would permit the analyst to evaluate how sectoral output would be likely to change from normal growth.

C. More Complete Summary Table

The report presents a number of small tables which are germane to the specific section of the report being discussed. What is needed is a more complete summary table showing the relationship between these segments of the analysis. The table on page 28 should be expanded to show not just total GNP, but each component to GNP, e.g., consumer durables, broken out by Tier. Also include a line for total intermediate demand and total gross output (as done in the table on page 34). Each table would be repeated for each year of the analysis.

D. Energy Considerations

The Macroeconomic Working Group assumed that price induced improvements in energy utilization efficiency would significantly offset losses in supplies. Did the I/O Working Group attempt to ascribe these efficiency improvements to specific economic sectors? Was an attempt made to estimate the energy requirements of the new mix of sector outputs appropriate to a wartime economy? The presumed energy utilization improvements might be negated by a strong shift towards energy intensive manufacturing and away from nonessential, service sector activities.

Did the I/O Working Group examine the shift in demands for refined petroleum products and the capabilities of the refinery sector to accommodate possible new yield requirements?

E. Statement on Labor Resources

The focus of the analysis is appropriately on sector output, but statements throughout about double and triple shifting beg for at least a statement that labor is a resource that needs to be accounted for.

F. Furniture and Household Equipment

The table on page 21 shows essential expenditures on this category at \$2.3 billion. This is inconsistent with the statement about earmarking \$2.5 billion for appliances exclusive of the expense of equipping new housing with furniture.

G. Sources

At numerous places in the document references are made to historical data from DOE and elsewhere. The sources should be explicitly identified.